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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,728	12/07/2005	Kunihiro Mima	2005_1840A	1832

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EXAMINER	
MANDEVILLE, JASON M	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/559,728	MIMA ET AL.	
	Examiner	Art Unit	
	JASON M. MANDEVILLE	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 24 May 2004. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1, 3, and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima (JP-2003-323150).

4. As pertaining to **Claim 1**, Kojima discloses (see Fig. 1 and Fig. 2) a method for driving a plasma display panel (10; also see Abstract) having a scan electrode (17Y), a sustain electrode (17X) and a data electrode (13A) forming a discharge cell at a point of

intersection therebetween (see Para. [0024] and [0026]-[0027]), the method for driving the plasma display panel comprising (Fig. 3 and Fig. 4 through Fig. 7; also see Para. [0028]-[0030]):

generating, during an initialization period (i.e., a reset period), an initialization discharge in the discharge cell (see Para. [0030]);

generating, during a writing period (i.e., an addressing period), a writing discharge in the discharge cell (see Para. [0031]); and

generating, during a sustain period (i.e., a sustaining period), a sustain discharge by alternately applying sustain pulses to the scan electrode (17Y) and sustain electrode (17X) of the discharge cell (see Para. [0032]-[0035]; also see Fig. 3 and Fig. 4),

wherein a rise time of a sustain pulse (i.e., see (31) in Fig. 3, Fig. 4 and Fig. 5; also see (31, 32a, 32b, 32d) in Fig. 6 and Fig. 7) applied to the scan electrode (17Y) during the sustain period is shortened at an arbitrary frequency (see Fig. 4 through Fig. 7; also see Para. [0039]-[0044] and Abstract).

wherein a rise time of a sustain pulse (i.e., see (31) in Fig. 3, Fig. 4 and Fig. 5; also see (31, 32a, 32b, 32c, 32e) in Fig. 6 and Fig. 7) applied to the sustain electrode (17X) during the sustain period is shortened at an arbitrary frequency (see Fig. 4 through Fig. 7; also see Para. [0039]-[0044] and Abstract).

wherein sustain pulses (31, 32; see Fig. 4 through Fig. 7), applied to the scan electrode (17Y) and the sustain electrode (17X) between the sustain pulses having the shortened rise time (i.e., see (31) in Fig. 3, Fig. 4 and Fig. 5; also see (31, 32a, 32b, 32c, 32d, 32e) in Fig. 6 and Fig. 7), have a non-shortened rise time that is longer than

the shortened rise time (i.e., see (32) in Fig. 3, Fig. 4 and Fig. 5; also see (32a, 32b, 32c, 32d, 32e) in Fig. 6 and Fig. 7; also see Para. [0039]-[0044] and Abstract).

Kojima does not explicitly state that the rise time of a sustain pulse applied to the scan electrode and the sustain electrode is shortened at a frequency of once every three times a sustain pulse is applied thereto. However, Kojima does explicitly show that the rise time of a sustain pulse applied to the scan electrode and/or the sustain electrode can be shortened at any arbitrary frequency (see Fig. 4 through Fig. 7). In fact, Kojima shows that the rise time of a sustain pulse can be shortened or made longer on a single pulse (see Fig. 4), on multiple pulses (see Fig. 5), or on every pulse (see Fig. 6 and Fig. 7). Thus, it would have been obvious to one of ordinary skill in the art at the time when the invention was made that the rise time of a sustain pulse applied to the scan electrode and/or the sustain electrode can be shortened at any arbitrary frequency, including a frequency of once every three times a sustain pulse is applied thereto, with sustain pulses having non-shortened or longer rise times interspersed between. Further, it would have been obvious to one of ordinary skill in the art at the time when the invention was made to try shortening the rise time of a sustain pulse applied to the scan electrode and/or sustain electrode during the sustain period at a frequency of once every three times a sustain pulse is applied thereto in order to stabilize the sustaining discharge (see Para. [0033]-[0035]).

5. As pertaining to **Claim 3**, Kojima discloses (see Fig. 1 and Fig. 2) a method for driving a plasma display panel (10; also see Abstract) having a scan electrode (17Y), a sustain electrode (17X) and a data electrode (13A) forming a discharge cell at a point of intersection therebetween (see Para. [0024] and [0026]-[0027]), the method for driving the plasma display panel comprising (Fig. 3 and Fig. 4 through Fig. 7; also see Para. [0028]-[0030]):

generating, during an initialization period (i.e., a reset period), an initialization discharge in the discharge cell (see Para. [0030]);

generating, during a writing period (i.e., an addressing period), a writing discharge in the discharge cell (see Para. [0031]); and

generating, during a sustain period (i.e., a sustaining period), a sustain discharge by alternately applying sustain pulses to the scan electrode (17Y) and sustain electrode (17X) of the discharge cell (see Para. [0032]-[0035]; also see Fig. 3 and Fig. 4),

wherein a rise time of a sustain pulse (i.e., see (31) in Fig. 3, Fig. 4 and Fig. 5; also see (31, 32a, 32b, 32d) in Fig. 6 and Fig. 7) applied to the scan electrode (17Y) during the sustain period is shortened at an arbitrary frequency (see Fig. 4 through Fig. 7; also see Para. [0039]-[0044] and Abstract).

wherein a rise time of a sustain pulse (i.e., see (31) in Fig. 3, Fig. 4 and Fig. 5; also see (31, 32a, 32b, 32c, 32e) in Fig. 6 and Fig. 7) applied to the sustain electrode (17X) during the sustain period is shortened at an arbitrary frequency (see Fig. 4 through Fig. 7; also see Para. [0039]-[0044] and Abstract).

wherein sustain pulses (31, 32; see Fig. 4 through Fig. 7), applied to the scan electrode (17Y) and the sustain electrode (17X) between the sustain pulses having the shortened rise time (i.e., see (31) in Fig. 3, Fig. 4 and Fig. 5; also see (31, 32a, 32b, 32c, 32d, 32e) in Fig. 6 and Fig. 7), have a non-shortened rise time that is longer than the shortened rise time (i.e., see (32) in Fig. 3, Fig. 4 and Fig. 5; also see (32a, 32b, 32c, 32d, 32e) in Fig. 6 and Fig. 7; also see Para. [0039]-[0044] and Abstract).

Kojima does not explicitly state that the rise time of a sustain pulse applied to the scan electrode and the sustain electrode is shortened at a frequency of once every two times and once every three times a sustain pulse is applied thereto. However, Kojima does explicitly show that the rise time of a sustain pulse applied to the scan electrode and/or the sustain electrode can be shortened at any arbitrary frequency (see Fig. 4 through Fig. 7). In fact, Kojima shows that the rise time of a sustain pulse can be shortened or made longer on a single pulse (see Fig. 4), on multiple pulses (see Fig. 5), or on every pulse (see Fig. 6 and Fig. 7). Thus, it would have been obvious to one of ordinary skill in the art at the time when the invention was made that the rise time of a sustain pulse applied to the scan electrode and/or the sustain electrode can be shortened at any arbitrary frequency, including a frequency of once every two times and once every three times a sustain pulse is applied thereto, with sustain pulses having non-shortened or longer rise times interspersed between. Further, it would have been obvious to one of ordinary skill in the art at the time when the invention was made to try shortening the rise time of a sustain pulse applied to the scan electrode and/or sustain

electrode during the sustain period at a frequency of once every two times and once every three times a sustain pulse is applied thereto in order to stabilize the sustaining discharge (see Para. [0033]-[0035]).

6. As pertaining to **Claim 4**, Kojima discloses (see Fig. 3 through Fig. 7) that a time delay exists between applying the sustain pulse having the shortened rise time (i.e., see (31) in Fig. 3, Fig. 4 and Fig. 5; also see (31, 32a, 32b, 32c, 32d, 32e) in Fig. 6 and Fig. 7) to the scan electrode (17Y) and applying the sustain pulse having the shortened rise time to the sustain electrode (17X), the time delay causing the sustain pulse having the shortened rise time to be applied to the sustain electrode (17X) only after a falling edge of the sustain pulse having the shortened rise time has occurred on the scan electrode (17Y) and a rising edge of a sustain pulse having a non-shortened rise time (i.e., see (32, 32a, 32b, 32c, 32d, 32e) in Fig. 4 through Fig. 7) has occurred on the scan electrode (17Y; see Fig. 4 through Fig. 7; also see Para. [0039]-[0044] and Abstract; specifically in Fig. 6 and Fig. 7, Kojima shows that the sustain pulse having a non-shortened rise time can be inserted on the scan electrode (17Y) before or after a sustain pulse having a shortened rise time occurs in either or both of the scan electrode and/or the sustain electrode; for example, Fig. 6 shows a sustain pulse having a shortened rise time (31) is applied to the scan electrode (17Y), then a sustain pulse having a shortened rise time (32b) is applied to the sustain electrode (17X) only after the falling edge of the sustain pulse having the shortened rise time (31) has occurred on the scan electrode (17Y) and a rising edge of a sustain pulse having a non-shortened

rise time (32a) has occurred on the scan electrode (17Y)).

Response to Arguments

7. Applicant's arguments with respect to **Claims 1, 3, and 4** have been considered but are moot in view of the new ground(s) of rejection. **Claim 1** has been amended. **Claims 3 and 4** are new. The applicant has argued that none of the references relied upon in the prior office action, namely Kojima (JP-2003-323150), teach or fairly suggest that a rise time of a sustain pulse applied to the scan electrode and the sustain electrode during the sustain period is shortened at a frequency of once every two times and/or once every three times a sustain pulse is applied thereto and that sustain pulses, applied to the scan electrode and the sustain electrode between the sustain pulses having the shortened rise time, have a non-shortened rise time that is longer than the shortened rise time. The examiner respectfully disagrees for the reasons provided in the above rejections. In particular, the examiner contends that Kojima clearly teaches adjusting the rise times of sustain pulses applied to both the scan and sustain electrodes. Further, Kojima clearly discloses that the rise times of each sustain pulse can be made arbitrarily shorter or longer at an arbitrary frequency in order to effect a stabilization of the sustaining discharge. It would have been obvious to one of ordinary skill in the art at the time when the invention was made to apply the teachings of Kojima in the manner claimed by the applicant (see above rejections). Further, the examiner

contends that shortening a rise time of a sustain pulse applied to the scan and/or sustain electrode at a frequency of once every two and/or three times a sustain pulse is applied thereto would have been an obvious matter of design choice, as there is no distinguishing feature of these frequencies that would not have been obvious from the teachings of Kojima. Further, the examiner contends that the teachings of Kojima make it obvious to try any number of arbitrary frequencies for shortening a rise time of a sustain pulse.

With respect to the claim for foreign priority, the applicant has stated that that International Bureau has forwarded a copy of priority document JP-2004-152802, as evidenced by attachment E, form PCT/IB/304, and PAIR. However, the examiner has failed to locate the certified copy of priority document JP-2004-152802 in the application or in PAIR.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. MANDEVILLE whose telephone number is 571-270-3136. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Mandeville
Examiner
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/J. M. M./
Examiner, Art Unit 2629

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